Virginia Administrative Code

Database updated through August 9, 2019

CHAPTER 580
UNDERGROUND STORAGE TANKS: TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS

Part I
Definitions, Applicability, and Installation Requirements for Partially Excluded UST Systems

9VAC25-580-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Aboveground release" means any release to the surface of the land or to surface water. This includes releases from the aboveground portion of a UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from a UST system.

"Airport hydrant fuel distribution system" or "airport hydrant system" means an UST system that fuels aircraft and operates under high pressure with large diameter piping that typically terminates into one or more hydrants (fill stands). The airport hydrant system begins where fuel enters one or more tanks from an external source such as a pipeline, barge, rail car, or other motor fuel carrier.

"Ancillary equipment" means any devices including such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST.

"Belowground release" means any release to the subsurface of the land and to groundwater. This includes releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank.

"Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.

"Board" means the State Water Control Board.

"Building official" means the executive official of the local government building department empowered by § 36-105 of the Code of Virginia to enforce and administer the Virginia Uniform Statewide Building Code (USBC) (§ 36-97 et seq. of the Code of Virginia).

"Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

"Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

"CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 USC § 9601 et seq.).

"Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.

"Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.

"Containment sump" means a liquid-tight container that protects the environment by containing leaks and spills of regulated substances from piping, dispensers, pumps, and related components in the containment area. Containment sumps may be single walled or secondarily contained and located at the top of the tank (tank top or submersible turbine pump sump), underneath the dispenser (under-dispenser containment sump), or at other points in the piping run (transition or intermediate sump).

"Corrosion expert" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

"De minimis" means trivial and beyond the intent of regulation, as that term is used at 53 FR 37108-37109.

"Delivery prohibition" is prohibiting the delivery, deposit, or acceptance of product to an underground storage tank system that has been determined to be ineligible by the board for such delivery, deposit, or acceptance.

"Delivery prohibition tag" means a tag, device, or mechanism on the tank's fill pipes that clearly identifies an underground storage tank system as ineligible for product delivery. The tag or device is easily visible to the product deliverer and clearly states and conveys that it is unlawful to deliver to, deposit into, or accept product into the ineligible underground storage tank system. The tag, device, or mechanism is generally tamper resistant.

"Dielectric material" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).

"Director" means the director of the Department of Environmental Quality.

"Dispenser" means equipment located aboveground that dispenses regulated substances from the UST system.

"Dispenser system" means the dispenser and the equipment necessary to connect the dispenser to the underground storage tank system.

"Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.

"Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.

"Existing tank system" means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before December 22, 1988. Installation is considered to have commenced if:

1. The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if

2. a. Either a continuous onsite physical construction or installation program has begun; or

b. The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction at the site or installation of the tank system to be completed within a reasonable time.

"Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

"Field-constructed tank" means a tank constructed in the field. For example, a tank constructed of concrete that is poured in the field, or a steel or fiberglass tank primarily fabricated in the field is considered field constructed.

"Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

"Free product" refers to a regulated substance that is present as a nonaqueous phase liquid (e.g., liquid not dissolved in water).

"Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

"Hazardous substance UST system" means an underground storage tank system that contains a hazardous substance defined in § 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (42 USC § 9601 et seq.) (but not including any substance regulated as a hazardous waste under subtitle C of RCRA) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

"Heating oil" means petroleum that is No. 1, No. 2, No. 4-light, No. 4-heavy, No. 5-light, No. 5-heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

"Hydraulic lift tank" means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

"Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.

"Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing product.

"Motor fuel" means a complex blend of hydrocarbons typically used in the operation of a motor engine, such as motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any blend containing one or more of these substances (for example, motor gasoline blended with alcohol).

"New tank system" means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988 (See also "existing tank system").

"Noncommercial purposes" with respect to motor fuel means not for resale.

"On the premises where stored" with respect to heating oil means UST systems located on the same property where the stored heating oil is used.

"Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under Part VII (9VAC25-580-310 et seq.) of this chapter.

"Operator" means any person in control of, or having responsibility for, the daily operation of the UST system.

"Overfill release" is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

"Owner" means:

1. In the case of a UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and

2. In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.

The term "owner" shall not include any person who, without participating in the management of an underground storage tank or being otherwise engaged in petroleum production, refining, and marketing, holds indicia of ownership primarily to protect the holder's security interest in the tank.

"Person" means an individual, trust, firm, joint stock company, corporation, including a government corporation, partnership, association, any state or agency thereof, municipality, county, town, commission, political subdivision of a state, any interstate body, consortium, joint venture, commercial entity, the government of the United States or any unit or agency thereof.

"Petroleum UST system" means an underground storage tank system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

"Pipe" or "piping" means a hollow cylinder or tubular conduit that is constructed of nonearthen materials.

"Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

"Product deliverer" is any person who delivers or deposits product into an underground storage tank.

"RCRA" means the federal Resource Conservation and Recovery Act of 1976 as amended (42 USC § 6901 et seq.).

"Regulated substance" means an element, compound, mixture, solution, or substance that, when released into the environment, may present substantial danger to the public health or welfare, or the environment. The term "regulated substance" includes:

1. Any substance defined in § 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC § 9601 et seq.), but not any substance regulated as a hazardous waste under subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC § 6901 et seq.); and

2. Petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60°F and 14.7 pounds per square inch absolute). The term "regulated substance" includes petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

"Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into groundwater, surface water or subsurface soils.

"Release detection" means determining whether a release of a regulated substance has occurred from the UST system into the environment or a leak has occurred into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

"Repair" means to restore to proper operating condition a tank, a pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, release detection equipment, or other UST system component that has caused a release of product from the UST system or has failed to function properly.

"Replaced" means:

1. For a tank - to remove a tank and install another tank.

2. For piping - to remove 50% or more of piping and install other piping, excluding connectors, connected to a single tank. For tanks with multiple piping runs, this definition applies independently to each piping run.

"Residential tank" is a tank located on property used primarily for dwelling purposes.

"SARA" means the Superfund Amendments and Reauthorization Act of 1986.

"Secondary containment" or "secondarily contained" means a release prevention and release detection system for a tank or piping. This system has an inner and outer barrier with an interstitial space that is monitored for leaks. This term includes containment sumps when used for interstitial monitoring of piping.

"Septic tank" is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil, and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

"Storm water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

"Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

"Tank" is a stationary device designed to contain an accumulation of regulated substances and constructed of nonearthen materials (e.g., concrete, steel, plastic) that provide structural support.

"Under-dispenser containment" or "UDC" means containment underneath a dispenser system designed to prevent leaks from the dispenser and piping within or above the UDC from reaching soil or groundwater.

"Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

"Underground release" means any belowground release.

"Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10% or more beneath the surface of the ground. This term does not include any:

1. Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

2. Tank used for storing heating oil for consumption on the premises where stored;

3. Septic tank;

4. Pipeline facility (including gathering lines):

a. Regulated under the Natural Gas Pipeline Safety Act of 1968 (49 USC § 1671 et seq.);

b. Regulated under the Hazardous Liquid Pipeline Safety Act of 1979 (49 USC § 2001 et seq.); or

c. Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in subdivision 4 a or 4 b of this definition;

5. Surface impoundment, pit, pond, or lagoon;

6. Storm water or wastewater collection system;

7. Flow-through process tank;

8. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

9. Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term "underground storage tank" or "UST" does not include any pipes connected to any tank that is described in subdivisions 1 through 9 of this definition.

"Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

"UST system" or "tank system" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

"Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 1.1, eff. October 25, 1989; amended, Virginia Register Volume 20, Issue 12, eff. March 24, 2004; Volume 26, Issue 25, eff. September 15, 2010; Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-20. Applicability.

A. The requirements of this chapter apply to all owners and operators of an UST system as defined in 9VAC25-580-10 except as otherwise provided in subsections B and C of this section.

1. Previously deferred UST systems. Airport hydrant fuel distribution systems, UST systems with field-constructed tanks, and UST systems that store fuel solely for use by emergency power generators must meet the requirements of this chapter as follows:

a. Airport hydrant fuel distribution systems and UST systems with field-constructed tanks must meet the requirements in Part X (9VAC25-580-380 et seq.) of this chapter.

b. UST systems that store fuel solely for use by emergency power generators installed before September 15, 2010, must have met all applicable requirements of this chapter before September 15, 2010, except that the requirements of Part IV (9VAC25-580-130 et seq.) of this chapter must be met before January 1, 2021.

c. UST systems that store fuel solely for use by emergency power generators installed on or after September 15, 2010, must meet all applicable requirements of this chapter at installation.

2. Any UST system listed in subsection C of this section must meet the requirements of 9VAC25-580-30.

B. Exclusions. The following UST systems are excluded from the requirements of this chapter:

1. Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act (42 USC § 6901) or a mixture of such hazardous waste and other regulated substances.

2. Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under § 402 or § 307(b) of the Clean Water Act.

3. Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks.

4. Any UST system whose capacity is 110 gallons or less.

5. Any UST system that contains a de minimis concentration of regulated substances.

6. Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

C. Partial Exclusions. Parts II (9VAC25-580-50 et seq.), III (9VAC25-580-80 et seq.), IV, V (9VAC25-580-190 et seq.), VII (9VAC25-580-310 et seq.), IX (9VAC25-580-370 et seq.), and X of this chapter do not apply to any of the following types of UST systems:

1. Wastewater treatment tank systems not covered under 9VAC25-580-20 B 2 of this section;

2. Aboveground storage tanks associated with:

a. Airport hydrant fuel distribution systems regulated under Part X of this chapter; and

b. UST systems with field-constructed tanks regulated under Part X of this chapter.

3. Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 USC § 2011 et seq.); and

4. Any UST system that is part of an emergency generator system at nuclear power generation facilities licensed by the Nuclear Regulatory Commission and subject to Nuclear Regulatory Commission requirements regarding design and quality criteria, including 10 CFR Part 50.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 1.2, eff. October 25, 1989; amended, Virginia Register Volume 26, Issue 25, eff. September 15, 2010; Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-30. Installation requirements for partially excluded UST systems.

Owners and operators must install an UST system listed in subsection C of 9VAC25-580-20 storing regulated substances (whether of single-wall or double-wall construction) that meets the following requirements:

1. Will prevent releases due to corrosion or structural failure for the operational life of the UST system;

2. Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and

3. Is constructed or lined with material that is compatible with the stored substance.

Note: The following codes of practice may be used as guidance for complying with this section:

(a) NACE International Standard Practice SP0285, External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection;

(b) NACE International Standard Practice SP0169, Control of External Corrosion on Underground or Submerged Metallic Piping Systems;

(c) American Petroleum Institute Recommended Practice 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems; or

(d) Steel Tank Institute Recommended Practice R892, Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 1.3, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-40. Permitting and inspection requirements for all UST systems.

In all instances of installation, upgrade, repair and closure where a UST system is constructed, enlarged, altered, repaired or closed all UST systems must be permitted and inspected in accordance with 9VAC25-580-50, 9VAC25-580-60, 9VAC25-580-110, 9VAC25-580-160, 9VAC25-580-170, 9VAC25-580-310, 9VAC25-580-320, 9VAC25-580-380, and 9VAC25-580-390.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 1.4, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

Part II
UST Systems: Design, Construction, Installation, and Notification

9VAC25-580-50. Performance standards for new UST systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new UST systems must meet the requirements in this section.

Tanks and piping installed or replaced on or after September 15, 2010, must be secondarily contained and use interstitial monitoring in accordance with subdivision 7 of 9VAC25-580-160, except for suction piping that meets the requirements of subdivisions 2 a (2) (a) through (e) of 9VAC25-580-140. Secondary containment must be able to contain regulated substances leaked from the primary containment until they are detected and removed and prevent the release of regulated substances to the environment at any time during the operational life of the UST system. For cases where the piping is considered to be replaced, the entire piping run must be secondarily contained.

1. Tanks. Each tank must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

a. The tank is constructed of fiberglass-reinforced plastic;

NOTE: The following codes of practice may be used to comply with subdivision 1 a of this section:

(1) Underwriters Laboratories Standard 1316, Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures; or

(2) Underwriter's Laboratories of Canada S615 Standard for Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids.

b. The tank is constructed of steel and cathodically protected in the following manner:

(1) The tank is coated with a suitable dielectric material;

(2) Field-installed cathodic protection systems are designed by a corrosion expert;

(3) Impressed current systems are designed to allow determination of current operating status as required in subdivision 3 of 9VAC25-580-90; and

(4) Cathodic protection systems are operated and maintained in accordance with 9VAC25-580-90; or

NOTE: The following codes of practice may be used to comply with subdivision 1 b of this section:

(a) Steel Tank Institute Specification for STI-P3® Specification and Manual for External Corrosion Protection of Underground SteelStorage Tanks;

(b) Underwriters Laboratories Standard 1746, External Corrosion Protection Systems for Steel Underground Storage Tanks;

(c) Underwriters Laboratories of Canada S603, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, and S603.1, Standard for External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids, and S631, Standard for Isolating Bushings for Steel Underground Tanks Protected with External Corrosion Protection Systems

(d) Steel Tank Institute Standard F841, Standard for Dual Wall Underground Steel Storage Tanks; or

(e) NACE International Standard Practice SP0285, External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, and Underwriters Laboratories Standard 58, Standard for Steel Underground Tanks for Flammable and Combustible Liquids.

c. The tank is constructed of steel and clad or jacketed with a noncorrodible material; or

NOTE: The following codes of practice may be used to comply with subdivision 1 c of this section:

(1) Underwriters Laboratories Standard 1746, External Corrosion Protection Systems for Steel Underground Storage Tanks;

(2) Steel Tank Institute ACT-100® Specification F894, Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks;

(3) Steel Tank Institute ACT-100-U® Specification F961, Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks; or

(4) Steel Tank Institute Specification F922, Steel Tank Institute Specification for Permatank®.

d. The tank construction and corrosion protection are determined by the board to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than subdivisions 1 a, 1 b, and 1 c of this section.

2. Piping. The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

a. The piping is constructed of a noncorrodible material.

NOTE: The following codes of practice may be used to comply with subdivision 2 a of this section:

(1) Underwriters Laboratories Standard 971, Nonmetallic Underground Piping for Flammable Liquids; or

(2) Underwriters Laboratories of Canada Standard S660, Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids.

b. The piping is constructed of steel and cathodically protected in the following manner:

(1) The piping is coated with a suitable dielectric material;

(2) Field-installed cathodic protection systems are designed by a corrosion expert;

(3) Impressed current systems are designed to allow determination of current operating status as required in subdivision 3 of 9VAC25-580-90; and

(4) Cathodic protection systems are operated and maintained in accordance with 9VAC25-580-90; or

NOTE: The following codes of practice may be used to comply with subdivision 2 b of this section:

(a) American Petroleum Institute Recommended Practice 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems;

(b) Underwriters Laboratories Subject 971A, Outline of Investigation for Metallic Underground Fuel Pipe;

(c) Steel Tank Institute Recommended Practice R892, Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems;

(d) NACE International Standard Practice SP0169, Control of External Corrosion on Underground or Submerged Metallic Piping Systems; or

(e) NACE International Standard Practice SP0285, External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.

c. The piping construction and corrosion protection are determined by the board to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in subdivisions 2 a and 2 b of this section.

3. Spill and overfill prevention equipment.

a. Except as provided in subdivisions 3 b and 3 c of this section, to prevent spilling and overfilling associated with product transfer to the UST system, owners and operators must use the following spill and overfill prevention equipment:

(1) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and

(2) Overfill prevention equipment that will:

(a) Automatically shut off flow into the tank when the tank is no more than 95% full;

(b) Alert the transfer operator when the tank is no more than 90% full by restricting the flow into the tank or triggering a high-level alarm; or

(c) Restrict the flow 30 minutes prior to overfilling, alert the transfer operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.

b. Owners and operators are not required to use the spill and overfill prevention equipment specified in subdivision 3 a of this section if:

(1) Alternative equipment is used that is determined by the board to be no less protective of human health and the environment than the equipment specified in subdivision 3 a (1) or 3 a (2) of this section; or

(2) The UST system is filled by transfers of no more than 25 gallons at one time.

c. Flow restrictors used in vent lines may not be used to comply with subdivision 3 a (2) of this section when overfill protection is installed or replaced on or after January 1, 2018.

d. Spill and overfill protection equipment must be periodically tested or inspected in accordance with 9VAC25-580-82.

4. Installation.

a. The UST system must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

b. Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia). No UST system shall be installed or placed into use without the owner and operator having obtained the required permit and inspections from the building official under the provisions of the Virginia Uniform Statewide Building Code.

In the case of state-owned facilities, the Department of General Services shall function as the building official in accordance with § 36-98.1 of the Code of Virginia.

In the case of federal facilities, the building official must be contacted. Owners and operators must obtain a permit and the required inspections must be issued in accordance with the provisions of the Virginia Uniform Statewide Building Code.

NOTE: Tank and piping system installation practices and procedures described in the following codes of practice may be used to comply with the requirements of subdivision 4 of this section:

(1) American Petroleum Institute Publication 1615, Installation of Underground Petroleum Storage System;

(2) Petroleum Equipment Institute Publication RP100, Recommended Practices for Installation of Underground Liquid Storage Systems; or

(3) National Fire Protection Association Standard 30, Flammable and Combustible Liquids Code and Standard 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages.

NOTE: These industry codes require that prior to bringing the system into use the following tests be performed: (i) tank tightness test (air); (ii) pipe tightness test (air or hydrostatic); and (iii) precision system test.

5. Certification of installation. All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection in subdivisions 5 a through 5 d of this section is performed, and a permit has been issued in accordance with the provisions of the Virginia Uniform Statewide Building Code to demonstrate compliance with subdivision 4 of this section. A certification of compliance on the UST Notification form must be submitted to the board in accordance with 9VAC25-580-70.

a. The installer has been certified by the tank and piping manufacturers;

b. The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation;

c. All work listed in the manufacturer's installation checklists has been completed; or

d. The owner and operator have complied with another method for ensuring compliance with subdivision 4 of this section that is determined by the board to be no less protective of human health and the environment.

6. Release detection. Release detection shall be provided in accordance with Part IV (9VAC25-580-130 et seq.) of this chapter.

7. Dispenser systems. Each UST system must be equipped with under-dispenser containment for any new dispenser system installed on or after September 15, 2010.

a. A dispenser system is considered new when both the dispenser and the equipment needed to connect the dispenser to the underground storage tank system are installed at an UST facility. The equipment necessary to connect the dispenser to the underground storage tank system includes check valves, shear valves, unburied risers or flexible connectors, or other transitional components that are underneath the dispenser and connect the dispenser to the underground piping.

b. Under-dispenser containment must be liquid-tight on its sides, bottom, and at any penetrations. Under-dispenser containment must allow for visual inspection and access to the components in the containment system or be periodically monitored for leaks from the dispenser system.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 2.1, eff. October 25, 1989; amended, Virginia Register Volume 20, Issue 12, eff. March 24, 2004; Volume 26, Issue 25, eff. September 15, 2010; Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-60. Upgrading of existing UST systems.

Owners and operators must permanently close in accordance with Part VII (9VAC25-580-310 et seq.) of this chapter any UST system that does not meet the new UST system performance standards in 9VAC25-580-50 or has not been upgraded in accordance with subdivisions 2, 3, and 4 of this section. This does not apply to previously deferred UST systems described in Part X (9VAC25-580-380 et seq.) of this chapter and where an upgrade is determined to be appropriate by the board.

Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

A permit from the building official must be obtained prior to upgrading any UST system. No upgraded UST system shall be placed into use unless and until the system is inspected in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

In the case of state-owned facilities, the Department of General Services shall function as the building official in accordance with § 36-98.1 of the Code of Virginia.

In the case of federal facilities the building official must be contacted. Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

1. Alternatives allowed. All existing UST systems must comply with one of the following requirements:

a. New UST system performance standards under 9VAC25-580-50;

b. The upgrading requirements in subdivisions 2, 3, and 4 of this section; or

c. Closure requirements under Part VII of this chapter, including applicable requirements for corrective action under Part VI (9VAC25-580-230 et seq.) of this chapter.

2. Tank upgrading requirements. Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

a. Interior lining. Tanks upgraded by internal lining must meet the following:

(1) The lining was installed in accordance with the requirements of 9VAC25-580-110; and

(2) Within 10 years after lining, and every five years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications. If the internal lining is no longer performing in accordance with original design specifications and cannot be repaired in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, then the lined tank must be permanently closed in accordance with Part VII of this chapter.

b. Cathodic protection. Tanks upgraded by cathodic protection must meet the requirements of 9VAC25-580-50 1 b (2), (3), and (4) and the integrity of the tank must have been ensured using one of the following methods:

(1) The tank was internally inspected and assessed to ensure that the tank was structurally sound and free of corrosion holes prior to installing the cathodic protection system;

(2) The tank had been installed for less than 10 years and is monitored monthly for releases in accordance with subdivisions 4 through 9 of 9VAC25-580-160;

(3) The tank had been installed for less than 10 years and was assessed for corrosion holes by conducting two tightness tests that meet the requirements of subdivision 3 of 9VAC25-580-160. The first tightness test must have been conducted prior to installing the cathodic protection system. The second tightness test must have been conducted between three and six months following the first operation of the cathodic protection system; or

(4) The tank was assessed for corrosion holes by a method that is determined by the board to prevent releases in a manner that is no less protective of human health and the environment than subdivisions 2 b (1), (2), and (3) of this section.

c. Internal lining combined with cathodic protection. Tanks upgraded by both internal lining and cathodic protection must meet the following:

(1) The lining was installed in accordance with the requirements of 9VAC25-580-110; and

(2) The cathodic protection system meets the requirements of subdivisions 1 b (2), (3), and (4) of 9VAC25-580-50.

NOTE: The following historical codes of practice were listed as options for complying with subdivision 2 of this section:

(a) American Petroleum Institute Publication 1631, Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks;

(b) National Leak Prevention Association Standard 631, Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection;

(c) National Association of Corrosion Engineers Standard RP-02-85, Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems; and

(d) American Petroleum Institute Recommended Practice 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems.

NOTE: The following codes of practice may be used to comply with the periodic lining inspection requirement in subdivision 2 a (2) of this section:

(a) American Petroleum Institute Recommended Practice 1631, Interior Lining and Periodic Inspection of Underground Storage Tanks;

(b) National Leak Prevention Association Standard 631, Chapter B Future Internal Inspection Requirements for Lined Tanks; or

(c) Ken Wilcox Associates Recommended Practice, Recommended Practice for Inspecting Buried Lined Steel Tanks Using a Video Camera.

3. Piping upgrading requirements. Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of subdivisions 2 b (2), (3) and (4) of 9VAC25-580-50.

NOTE: The codes of practice listed in the note following subdivision 2 b of 9VAC25-580-50 may be used to comply with this requirement.

4. Spill and overfill prevention equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with UST system spill and overfill prevention equipment requirements specified in subdivision 3 of 9VAC25-580-50.

5. Release detection. Release detection shall be provided in accordance with Part IV (9VAC25-580-130 et seq.) of this chapter.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 2.2, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-70. Notification requirements.

A. After May 8, 1986, an owner must submit notice of a tank system's existence to the board within 30 days of bringing the underground storage tank system into use. Owners must use a UST Notification form approved by the board.

B. Any change in ownership, tank status, tank/piping systems, or substance stored requires the UST owner to submit an amended notification form, or other documentation approved by the board, within 30 days after such change or upgrade occurs or is brought into

use. Owners may provide notice for several tanks using one notification form, but owners with tanks located at more than one place of operation must file a separate notification form for each separate place of operation.

C. Under Virginia UST notification requirements effective July 1, 1987, owners of property who have actual knowledge of underground storage tanks on such property that were taken out of service before January 1, 1974, yet are still in the ground, must notify the board on the notification form.

NOTE: Under the federal UST Notification Program, owners and operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the board in accordance with the Hazardous and Solid Waste Amendments of 1984, P.L. 98-616 (42 USC § 9603), on a form published by EPA on November 8, 1985, (50 FR 46602) unless notice was given pursuant to § 103(c) of CERCLA. Owners and operators who have not complied with the notification requirements may use portions I through VI of the UST Notification form approved by the board.

D. All owners and operators of new UST systems must certify in the notification form compliance with the following requirements:

1. Installation of tanks and piping under subdivision 5 of 9VAC25-580-50.

2. Cathodic protection of steel tanks and piping under subdivisions 1 and 2 of 9VAC25-580-50.

3. Financial responsibility under financial responsibility regulations promulgated by the board under 9VAC25-590.

4. Release detection under 9VAC25-580-140 and 9VAC25-580-150.

E. All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping comply with the requirements in subdivision 4 of 9VAC25-580-50.

F. Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under subsection A of this section. The statement provided in the following note, when used on shipping tickets and invoices, may be used to comply with this requirement:

NOTE: A federal law (the Solid Waste Disposal Act, 42 USC § 6901 et seq.) requires owners of certain underground storage tanks to notify implementing agencies of the existence of their tanks. Notifications must be made within 30 days of bringing the tank into use. Consult EPA's regulations at 40 CFR 280.22 to determine if you are affected by this law.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 2.3, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

Part III
General Operating Requirements

9VAC25-580-80. Spill and overfill control.

A. Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

NOTE: The transfer procedures described in National Fire Protection Association Standard 385 Standard for Tank Vehicles for Flammable and Combustible Liquids or American Petroleum Institute Recommended Practice 1007, Loading and Unloading of MC 306/DOT 406 Cargo Tank Motor Vehicles may be used to comply with this subsection. Further guidance on spill and overfill prevention appears in American Petroleum Institute, Recommended Practice 1621, Bulk Liquid Stock Control at Retail Outlets.

B. The owner and operator must report, investigate, and clean up any spills and overfills in accordance with 9VAC25-580-220.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 3.1, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-82. Periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment.

A. Owners and operators of UST systems with spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping must meet these requirements to ensure the equipment is operating properly and will prevent releases to the environment:

1. Spill prevention equipment (such as a catchment basin, spill bucket, or other spill containment device) and containment sumps used for interstitial monitoring of piping must prevent releases to the environment by meeting one of the following:

a. The equipment is double walled and the integrity of both walls is periodically monitored as described in 9VAC25-580-85 A 1 a (1) at a frequency not less than the frequency of the walkthrough inspections described in 9VAC25-580-85. Within 30 days of discontinuing periodic monitoring under this subdivision, owners and operators must conduct a test in accordance with subdivision A 1 b of this section and begin meeting the requirements of that subdivision; or

b. The spill prevention equipment and containment sumps used for interstitial monitoring of piping are tested at least once every three years to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing in accordance with one of the following criteria:

(1) Requirements developed by the manufacturer (Note: Owners and operators may use this option only if the manufacturer has developed requirements);

(2) Code of practice developed by a nationally recognized association or independent testing laboratory; or

(3) Requirements determined by the board to be no less protective of human health and the environment than the requirements listed in subdivisions A 1 b (1) and (2) of this section.

2. Overfill prevention equipment must be inspected at least once every three years. At a minimum, the inspection must ensure that overfill prevention equipment is set to activate at the correct level specified in subdivision 3 of 9VAC25-580-50 and will activate when regulated substance reaches that level. Inspections must be conducted in accordance with one of the criteria in subdivisions 1 b (1), (2), or (3) of this subsection.

NOTE: The following code of practice may be used to comply with subdivisions A 1 b and A 2 of this section: Petroleum Equipment Institute Publication RP 1200, Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities.

B. Owners and operators must begin meeting these requirements as follows:

1. For UST systems in use before January 1, 2018, the initial spill prevention equipment test, containment sump test, and overfill prevention equipment inspection must be conducted not later than January 1, 2021.

2. For UST systems brought into use on or after January 1, 2018, these requirements apply at installation.

C. Owners and operators must maintain records as follows in accordance with 9VAC25-580-120 for spill prevention equipment, containment sumps used for interstitial monitoring of piping, and overfill prevention equipment:

1. All records of testing or inspection must be maintained for three years; and

2. For spill prevention equipment and containment sumps used for interstitial monitoring of piping not tested every three years, documentation showing that the prevention equipment is double walled and the integrity of both walls is periodically monitored must be maintained for as long as the equipment is periodically monitored.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-85. Periodic operation and maintenance walkthrough inspections.

A. To properly operate and maintain UST systems, not later than January 1, 2021, owners and operators must meet one of the following:

1. Conduct a walkthrough inspection that, at a minimum, checks the following equipment as specified below:

a. Every 30 days (Exception: spill prevention equipment at UST systems receiving deliveries at intervals greater than every 30 days may be checked prior to each delivery):

(1) Spill prevention equipment – visually check for damage; remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to make sure it is securely on the fill pipe; and, for double walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area; and

(2) Release detection equipment – check to make sure the release detection equipment is operating with no alarms or other unusual operating conditions present and ensure records of release detection testing are reviewed and current; and

b. Annually:

(1) Containment sumps – visually check for damage, leaks to the containment area, or releases to the environment; remove liquid (in contained sumps) or debris; and, for double walled sumps with interstitial monitoring, check for a leak in the interstitial area; and

(2) Handheld release detection equipment – check devices such as tank gauge sticks or groundwater bailers for operability and serviceability;

2. Conduct operation and maintenance walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory that checks equipment comparable to subdivision 1 of this subsection; or

3. Conduct operation and maintenance walkthrough inspections according to a protocol developed by the board that checks equipment comparable to subdivision 1 of this subsection.

B. Owners and operators must maintain records (in accordance with 9VAC25-580-120) of operation and maintenance walkthrough inspections for one year. Records must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every 30 days due to infrequent deliveries.

NOTE: The following code of practice may be used to comply with subdivision A 2 of this section: Petroleum Equipment Institute Recommended Practice RP 900, Recommended Practices for the Inspection and Maintenance of UST Systems.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-90. Operation and maintenance of corrosion protection.

All owners and operators of metal UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented until the UST system is permanently closed or undergoes a change-in-service pursuant to 9VAC25-580-320:

1. All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

2. All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

a. Frequency. All cathodic protection systems must be tested within six months of installation and at least every three years thereafter; and

b. Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association.

NOTE: The following codes of practice may be used to comply with subdivision 2 of this section:

(1) NACE International Test Method TM0101, Measurement Techniques Related to Criteria for Cathodic Protection of Underground Storage Tank Systems;

(2) NACE International Test Method TM0497, Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems;

(3) Steel Tank Institute Recommended Practice R051, Cathodic Protection Testing Procedures for STI-P3® USTs;

(4) NACE International Standard Practice SP0285, External Control of Underground Storage Tank Systems by Cathodic Protection; or

(5) NACE International Standard Practice SP0169, Control of External Corrosion on Underground or Submerged Metallic Piping Systems.

3. UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is running properly. These systems only provide the necessary corrosion protection when in continuous operation. Such equipment shall be installed so that it cannot be inadvertently shut off.

4. For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with 9VAC25-580-120) to demonstrate compliance with the performance standards in this section. These records must provide the following:

a. The results of the last three inspections required in subdivision 3 of this section; and

b. The results of testing from the last two inspections required in subdivision 2 of this section.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 3.2, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-100. Compatibility.

A. Owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

B. Owners and operators must notify the board at least 30 days prior to switching to a regulated substance containing greater than 10% ethanol, greater than 20% biodiesel, or any other regulated substance identified by the board. In addition, owners and operators with UST systems storing these regulated substances must meet one of the following:

1. Demonstrate compatibility of the UST system, including the tank, piping, containment sumps, pumping equipment, release detection equipment, spill equipment, and overfill equipment. Owners and operators may demonstrate compatibility of the UST system by using one of the following options:

a. Certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored; or

b. Equipment or component manufacturer approval. The manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the equipment or component is compatible with, and be from the equipment or component manufacturer; or

2. Use another option determined by the board to be no less protective of human health and the environment than the options listed in subdivision 1 of this subsection.

C. Owners and operators must maintain records in accordance with subdivision 2 of 9VAC25-580-120 documenting compliance with subsection B of this section for as long as the UST system is used to store the regulated substance.

NOTE: The following code of practice may be useful in complying with this section:

American Petroleum Institute Recommended Practice 1626, Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 3.3, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-110. Repairs allowed.

Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

A permit from the building official must be obtained prior to repairing any UST system. No repaired UST system shall be placed into use unless and until the system is inspected in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

In the case of state-owned facilities the Department of General Services shall function as the building official in accordance with § 36-98.1 of the Code of Virginia.

In the case of federal facilities the building official must be contacted. Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

Owners and operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

1. Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

NOTE: The following codes of practice may be used to comply with subdivision 1 of this section:

a. National Fire Protection Association Standard 30, Flammable and Combustible Liquids Code;

b. American Petroleum Institute Recommended Practice RP 2200, Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines;

c. American Petroleum Institute Recommended Practice RP 1631, Interior Lining and Periodic Inspection of Underground Storage Tanks;

d. National Fire Protection Association Standard 326, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair;

e. National Leak Prevention Association Standard 631, Chapter A, Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks;

f. Steel Tank Institute Recommended Practice R972, Recommended Practice for the Addition of Supplemental Anodes to STI-P3® Tanks;

g. NACE International Standard Practice SP 0285, External Control of Underground Storage Tank Systems by Cathodic Protection; or

h. Fiberglass Tank and Pipe Institute Recommended Practice T-95-02, Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks.

2. Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

3. Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Noncorrodible pipes and fittings may be repaired in accordance with the manufacturer's specifications.

4. Repairs to secondary containment areas of tanks and piping used for interstitial monitoring and to containment sumps used for interstitial monitoring of piping must have the secondary containment tested for tightness according to the manufacturer's instructions, a code of practice developed by a nationally recognized association or independent testing laboratory, or according to requirements established by the board within 30 days following the date of completion of the repair.

5. All other repairs to tanks and piping must be tightness tested in accordance with subdivision 3 of 9VAC25-580-160 and subdivision 2 of 9VAC25-580-170 within 30 days following the date of the completion of the repair except as provided below:

a. The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory;

b. The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in subdivisions 4 through 9 of 9VAC25-580-160; or

c. Another test method is used that is determined by the board to be no less protective of human health and the environment than those listed in subdivisions a and b of this subdivision 5.

NOTE: The following codes of practice may be used to comply with subdivisions 4 and 5 of this section:

(1) Steel Tank Institute Recommended Practice R012, Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks; or

(2) Fiberglass Tank and Pipe Institute Protocol, Field Test Protocol for Testing the Annular Space of Installed Underground Fiberglass Double and Triple-Wall Tanks With Dry Annular Space.

(3) Petroleum Equipment Institute Recommended Practice RP1200, Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities.

6. Within six months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with subdivisions 2 and 3 of 9VAC25-580-90 to ensure that it is operating properly.

7. Within 30 days following any repair to spill or overflow prevention equipment, the repaired spill or overflow prevention equipment must be tested or inspected as appropriate, in accordance with 9VAC25-580-82 to ensure it is operating properly.

8. UST system owners and operators must maintain records in accordance with 9VAC25-580-120 of each repair until the UST system is permanently closed or undergoes a change-in-service pursuant to 9VAC25-580-320.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 3.4, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-120. Reporting and recordkeeping.

Owners and operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the board, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to § 9005 of Subtitle I of the Solid Waste Disposal Act, as amended.

1. Reporting. Owners and operators must submit the following information to the board:

a. Notification for all UST systems (9VAC25-580-70), which includes certification of installation for new UST systems (subdivision 5 of 9VAC25-580-50) and notification when any person assumes ownership of an UST system (9VAC25-580-70);

b. Notification prior to UST systems switching to certain regulated substances (subsection B of 9VAC25-580-100);

c. Reports of all releases including suspected releases (9VAC25-580-190), spills and overfills (9VAC25-580-220), and confirmed releases (9VAC25-580-240);

d. Corrective actions planned or taken including initial abatement measures (9VAC25-580-250), site characterization (9VAC25-580-260), free product removal (9VAC25-580-270), and corrective action plan (9VAC25-580-280); and

e. An amended notification form must be submitted within 30 days after permanent closure or change-in-service (9VAC25-580-320).

2. Recordkeeping. Owners and operators must maintain the following information:

a. Documentation of operation of corrosion protection equipment (subdivision 4 of 9VAC25-580-90);

b. Documentation of compatibility for UST systems (subsection C of 9VAC25-580-100);

c. Documentation of UST system repairs (subdivision 8 of 9VAC25-580-110);

d. Documentation of compliance and applicable installation records for spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping (subsection C of 9VAC25-580-82);

e. Documentation of periodic walkthrough inspections (subsection B of 9VAC25-580-85);

f. Documentation of compliance with release detection requirements (9VAC25-580-180);

g. Results of the site investigation conducted at permanent closure (9VAC25-580-350); and

h. Documentation of operator training required by 9VAC25-580-125, including verification of training for current Class A, Class B, and Class C operators, and current list of operators and written instructions or procedures for Class C operators (9VAC25-580-125).

3. Availability and maintenance of records. Owners and operators must keep the records required either:

a. At the UST site and immediately available for inspection by the board; or

b. At a readily available alternative site and be provided for inspection to the board upon request.

In the case of permanent closure records required under 9VAC25-580-350, owners and operators are also provided with the additional alternative of mailing closure records to the board if they cannot be kept at the site or an alternative site as indicated above.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 3.5, eff. October 25, 1989; amended, Virginia Register Volume 26, Issue 25, eff. September 15, 2010; Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-125. Operator training.

A. Definitions.

1. For purposes of this section, "Class A operator" means an operator who has primary responsibility to operate and maintain the underground storage tank system and facility. The Class A operator's responsibilities include managing resources and personnel, such as establishing work assignments, to achieve and maintain compliance with regulatory requirements. In general, Class A operators focus on the broader aspects of the underground storage tank statutory and regulatory requirements and standards necessary to properly operate and maintain the underground storage tank system and facility.

2. For purposes of this section, "Class B operator" means an operator who implements applicable underground storage tank regulatory requirements and standards in the field or at the underground storage tank facility. A Class B operator oversees and implements the day-to-day aspects of operations, maintenance, and recordkeeping for the underground storage tanks at one or more facilities.

3. For purposes of this section, "Class C operator" means the person responsible for responding to alarms or other indications of emergencies caused by spills or releases from underground storage tank systems and equipment failures. A Class C operator, generally, is the first line of response to events indicating emergency conditions.

B. Requirements for trained operators.

1. Owners and operators of UST systems shall designate Class A, Class B, and Class C operators for each UST system or facility that has underground storage tanks.

a. A person may be designated for more than one class of operator.

b. Any person designated for more than one class of operator shall successfully complete the required training under subsection C of this section for each operator class for which he is designated.

c. Persons trained in accordance with subsection C of this section may perform operator duties consistent with their training when employed or contracted by the tank owner or operator to perform these functions.

2. Class A operators shall be familiar with training requirements for each class of operator and may provide required training for Class C operators.

3. Class B operators shall be familiar with Class B and Class C operator responsibilities and may provide training for Class C operators.

4. Trained operators shall be readily available to respond to suspected/confirmed releases, other unusual operating conditions and equipment shut-offs or failures.

a. The Class A or Class B operator shall be available for immediate telephone consultation when an UST facility is in operation. A Class A or Class B operator shall be able to be onsite at the facility within a reasonable time to perform necessary functions.

b. For manned facilities, a Class C operator shall be onsite whenever the UST facility is in operation. After September 15, 2010, written instructions or procedures shall be maintained and visible at manned UST facilities for persons performing duties of the Class C operator to follow and to provide notification necessary in the event of emergency conditions.

c. For unmanned facilities, a Class C operator shall be available for immediate telephone consultation and shall be able to be onsite within a reasonable time to perform necessary functions. Emergency contact information shall be prominently displayed at the site. After September 15, 2010, written instructions or procedures shall be maintained and visible at unmanned UST facilities for persons performing duties of the Class C operator to follow and to provide notification necessary in the event of emergency conditions.

C. Required training.

1. Class A operators shall successfully complete a training course approved by the board that includes a general knowledge of UST system requirements. Training shall provide information that should enable the operator to make informed decisions regarding compliance and ensuring that appropriate persons are fulfilling operation, maintenance, and recordkeeping requirements and standards of this chapter and/or federal underground storage tank requirements in 40 CFR Part 280 (relating to technical standards and corrective action requirements for owners and operators of underground storage tanks (UST)), including, at a minimum, the following:

a. Spill and overfill prevention;

b. Release detection and related reporting requirements;

c. Corrosion protection;

d. Emergency response;

e. Product and equipment compatibility;

f. Financial responsibility;

g. Notification and storage tank registration requirements;

h. Temporary and permanent closure requirements; and

i. Class B and Class C operator training requirements.

2. Class B operators shall successfully complete a training course approved by the board that includes an in-depth understanding of operation and maintenance aspects of UST systems and related regulatory requirements. Training shall provide specific information on the components of UST systems, materials of construction, methods of release detection and release prevention applied to UST systems and components. Training shall address operation and maintenance requirements of this chapter and/or federal underground storage tank requirements in 40 CFR Part 280, including, at a minimum, the following:

a. Spill and overfill prevention;

b. Release detection and related reporting requirements;

c. Corrosion protection and related testing;

d. Emergency response;

e. Product and equipment compatibility;

f. Reporting and recordkeeping requirements; and

g. Class C operator training requirements.

3. Class C operators. At a minimum, training provided by the tank owner or Class A or Class B operator shall enable the Class C operator to take action in response to emergencies caused by spills or releases and alarms from an underground storage tank. Training shall include written instructions or procedures for the Class C operator to follow and to provide notification necessary in the event of emergency conditions.

4. Successful completion for Class A and Class B operators means completion of the entire training course and demonstration of knowledge of the course material as follows:

a. Receipt of a passing grade (a score of 80% or better) on an examination of material presented in the training course, or demonstration through practical (hands-on) application to the trainer of operation and maintenance checks of underground storage tank equipment, including performance of release detection at the UST facility, at the conclusion of onsite training; and

b. Receipt of a training certificate by an approved trainer upon verification of successful completion of training under this section.

5. Reciprocity. The board may also recognize successful completion of Class A and Class B operator training on regulatory standards consistent with 40 CFR Part 280, which is recognized by other state or implementing agencies and which is approved by EPA as meeting operator training grant guidelines published by EPA.

6. The tank owner and operator shall incur the costs of the training.

D. Timing of training.

1. An owner and operator shall ensure that Class A, Class B and Class C operators are trained as soon as practicable after September 15, 2010, contingent upon availability of approved training providers, but not later than August 8, 2012.

2. When a Class A or Class B operator is replaced after August 8, 2012, a new operator shall be trained within 60 days of assuming duties for that class of operator.

3. Class C operators shall be trained before assuming duties of a Class C operator. After September 15, 2010, written instructions or procedures shall be provided to Class C operators to follow and to provide notification necessary in the event of emergency conditions. Class C operators shall be briefed on these instructions or procedures at least annually (every 12 months), which may be concurrent with annual safety training required under Occupational Safety and Health Administration, 29 CFR Part 1910 (relating to Occupational Safety and Health Standards).

E. Retraining.

1. Owners and operators of UST systems shall ensure that Class A and B operators in accordance with subsection C of this section are retrained if the board determines that the UST system is out of compliance with the requirements of 9VAC25-580-30 through 9VAC25-580-190. At a minimum, Class A and Class B operators shall successfully complete retraining in the areas identified as out of compliance.

2. Class A and B operators shall complete training pursuant to this subsection no later than 90 days from the date the board identifies the noncompliance.

F. Documentation.

1. Owners and operators of underground storage tank facilities shall prepare and maintain a list of designated Class A, Class B, and Class C operators. The list shall represent the current Class A, Class B, and Class C operators for the UST facility and shall include:

a. The name of each operator, class of operation trained for, and the date each operator successfully completed initial training and refresher training, if any.

b. For Class A and Class B operators that are not permanently onsite or assigned to more than one facility, telephone numbers to contact the operators.

2. A copy of the certificates of training for Class A and Class B operators shall be on file as long as each operator serves in that capacity at the facility or three years, whichever is longer, and readily available, and a copy of the facility list of Class A, Class B, and Class C operators and Class C operator instructions or procedures shall be kept onsite and immediately available for manned UST facilities and readily available for unmanned facilities (see subdivision 2 h of 9VAC25-580-120 relating to reporting and recordkeeping).

3. Class C operator and owner contact information, including names and telephone numbers, and any emergency information shall be conspicuously posted at unmanned facilities.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 1.2, eff. October 25, 1989; amended, Virginia Register Volume 26, Issue 25, eff. September 15, 2010; Volume 34, Issue 1, eff. January 1, 2018.

Part IV
Release Detection

9VAC25-580-130. General requirements for all petroleum and hazardous substance UST systems.

A. Owners and operators of UST systems must provide a method, or combination of methods, of release detection that:

1. Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;

2. Is installed and calibrated in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition;

3. Beginning on January 1, 2021, is operated and maintained, and electronic and mechanical components are tested for proper operation, in accordance with one of the following: (i) manufacturer's instructions; (ii) a code of practice developed by a nationally recognized association or independent testing laboratory; or (iii) requirements determined by the board to be no less protective of human health and the environment than the two options listed in subdivisions 1 and 2 of this subsection. A test of the proper operation must be performed at least annually and, at a minimum, as applicable to the facility, cover the following components and criteria:

a. Automatic tank gauge and other controllers: test alarm; verify system configuration; test battery backup;

b. Probes and sensors: inspect for residual buildup; ensure floats move freely; ensure shaft is not damaged; ensure cables are free of kinks and breaks; test alarm operability and communication with controller;

c. Automatic line leak detector: test operation to meet criteria in subdivision 1 of 9VAC25-580-170 by simulating a leak;

d. Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller; and

e. Handheld electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.

NOTE: The following code of practice may be used to comply with subdivision 3 of this subsection. Petroleum Equipment Institute Publication RP 1200, Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities.

4. Meets the performance requirements in 9VAC25-580-160 or 9VAC25-580-170 or Part X (9VAC25-580-380 et seq.) of this chapter as applicable with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, the methods listed in subdivisions 2, 3, 4, 8, and 9 of 9VAC25-580-160; subdivisions 1 and 2 of 9VAC25-580-170; and Part X must be capable of detecting the leak rate or quantity specified for that method in the corresponding section of the regulation with a probability of detection of 0.95 and a probability of false alarm of 0.05.

B. When a release detection method operated in accordance with the performance standards in 9VAC25-580-160, 9VAC25-580-170, or Part X of this chapter indicates a release may have occurred, owners and operators must notify the board in accordance with Part V (9VAC25-580-190 et seq.) of this chapter.

C. Any UST system that cannot apply a method of release detection that complies with the requirements of this part must complete the closure procedures in Part VII (9VAC25-580-310 et seq.) of this chapter. For previously deferred UST systems described in Parts I (9VAC25-580-10 et seq.) and X of this chapter, this requirement applies on or after the effective dates described in 9VAC25-580-20 A 1 b and c and 9VAC25-580-380 A 1.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 4.1, eff. October 25, 1989; amended, Virginia Register Volume 20, Issue 12, eff. March 24, 2004; Volume 26, Issue 25, eff. September 15, 2010; Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-140. Requirements for petroleum UST systems.

Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

1. Tanks. Tanks must be monitored for releases as follows:

a. Tanks installed before September 15, 2010, must be monitored for releases at least every 30 days for releases using one of the methods listed in subdivisions 4 through 9 of 9VAC25-580-160 except that:

(1) UST systems that meet the performance standards in subdivisions 1 through 5 of 9VAC25-580-50 or subdivisions 1 through 4 of 9VAC25-580-60 may use both monthly inventory control requirements in subdivision 1 or 2 of 9VAC25-580-160, and tank tightness testing (conducted in accordance with subdivision 3 of 9VAC25-580-160) at least every five years until 10 years after the tank was installed; and

(2) Tanks with capacity of 550 gallons or less and tanks with a capacity of 551 to 1000 gallons that meet the tank diameter criteria in subdivision 2 of 9VAC25-580-160 may use manual tank gauging (conducted in accordance with subdivision 2 of 9VAC25-580-160).

b. Tanks installed on or after September 15, 2010, must be monitored for releases at least every 30 days in accordance with subdivision 7 of 9VAC25-580-160.

2. Piping. Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

a. Piping installed before September 15, 2010, must meet one of the following:

(1) Pressurized piping. Underground piping that conveys regulated substances under pressure must:

(a) Be equipped with an automatic line leak detector conducted in accordance with subdivision 1 of 9VAC25-580-170; and

(b) Have an annual line tightness test conducted in accordance with subdivision 2 of 9VAC25-580-170 or have monthly monitoring conducted in accordance with subdivision 3 of 9VAC25-580-170.

(2) Suction piping. Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every three years and in accordance with subdivision 2 of 9VAC25-580-170, or use a monthly monitoring method conducted in accordance with subdivision 3 of 9VAC25-580-170. No release detection is required for suction piping that is designed and constructed to meet the following standards:

(a) The below-grade piping operates at less than atmospheric pressure;

(b) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

(c) Only one check valve is included in each suction line;

(d) The check valve is located directly below and as close as practical to the suction pump; and

(e) A method is provided that allows compliance with subdivisions 2 a (2) (b), (c), and (d) of this section to be readily determined.

b. Piping installed or replaced on or after September 15, 2010, must meet one of the following:

(1) Pressurized piping must be monitored for releases at least every 30 days in accordance with subdivision 7 of 9VAC25-580-160 and be equipped with an automatic line leak detector in accordance with subdivision 1 of 9VAC25-580-170.

(2) Suction piping must be monitored for releases at least every 30 days in accordance with subdivision 7 of 9VAC25-580-160. No release detection is required for suction piping that meets the requirements of subdivisions 2 a (2) (a) through (e) of this section.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 4.2, eff. October 25, 1989; amended, Volume 26, Issue 25, eff. September 15, 2010; Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-150. Requirements for hazardous substance UST systems.

Owners and operators of hazardous substance UST systems must provide containment that meets the following requirements and monitor these systems using subdivision 7 of 9VAC25-580-160 at least every 30 days:

1. Secondary containment systems must be designed, constructed and installed to:

a. Contain regulated substances leaked from the primary containment until they are detected and removed;

b. Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

c. Be checked for evidence of a release at least every 30 days.

NOTE: The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements for tanks installed before September 15, 2010.

2. Double-walled tanks must be designed, constructed, and installed to:

a. Contain a leak from any portion of the inner tank within the outer wall; and

b. Detect the failure of the inner wall.

3. External liners (including vaults) must be designed, constructed, and installed to:

a. Contain 100% of the capacity of the largest tank within its boundary;

b. Prevent the interference of precipitation or groundwater intrusion with the ability to contain or detect a release of regulated substances; and

c. Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

4. Underground piping must be equipped with secondary containment that satisfies the requirements of this section (e.g., trench liners, double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with subdivision 1 of 9VAC25-580-170.

5. For hazardous substance UST systems installed before September 15, 2010, other methods of release detection may be used if owners and operators:

a. Demonstrate to the board that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in subdivisions 2 through 9 of 9VAC25-580-160 can detect a release of petroleum;

b. Provide information to the board on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and

c. Obtain approval from the board to use the alternate release detection method before the installation and operation of the new UST system.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 4.3, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-160. Methods of release detection for tanks.

Owners and operators must obtain a permit and the required inspections in accordance with 9VAC25-580-50 or 9VAC25-580-60 for the installation of certain release detection equipment contained in subdivisions 4 through 9 of this section.

Each method of release detection for tanks used to meet the requirements of 9VAC25-580-140 must be conducted in accordance with the following and be designed to detect releases at the earliest possible time for the specific method chosen:

1. Inventory control. Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0% of flow-through plus 130 gallons on a monthly basis in the following manner:

a. Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

b. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest 1/8 of an inch;

c. The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

d. Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

e. Product dispensing is metered and recorded according to regulations of the Bureau of Weights and Measures of the Virginia Department of Agriculture and Consumer Services for meter calibration within their jurisdiction; for all other product dispensing meter calibration, an accuracy of six cubic inches for every five gallons of product withdrawn is required; and

f. The measurement of any water level in the bottom of the tank is made to the nearest 1/8 of an inch at least once a month.

NOTE: Practices described in the American Petroleum Institute Recommended Practice RP 1621 Bulk Liquid Stock Control at Retail Outlets, may be used, where applicable, as guidance in meeting the requirements of this subsection.

2. Manual tank gauging. Manual tank gauging must meet the following requirements:

a. Tank liquid level measurements are taken at the beginning and ending of a period using the appropriate minimum duration of test value in the table below during which no liquid is added to or removed from the tank;

b. Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

c. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest 1/8 of an inch;

d. A release is suspected and subject to the requirements of Part V (9VAC25-580-190 et seq.) if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity	Minimum Duration of Test	Weekly Standard (One Test)	Monthly Standard (Four Test Average)
550 gallons or less	36 hours	10 gallons	5 gallons
551 - 1,000 gallons	44 hours	9 gallons	4 gallons

(when tank diameter is 64 inches)			
551 - 1,000 gallons (when tank diameter is 48 inches)	58 hours	12 gallons	6 gallons
551 -1,000 gallons (also requires periodic tank tightness testing)	36 hours	13 gallons	7 gallons
1001 - 2,000 gallons (also requires periodic tank tightness testing)	36 hours	26 gallons	13 gallons

e. Tanks of 550 gallons or less nominal capacity and tanks with a nominal capacity of 551 to 1,000 gallons that meet the tank diameter criteria in the table in subdivision 2 d of this section may use this as the sole method of release detection. All other tanks with a nominal capacity of 551 to 2,000 gallons may use the method in place of inventory control in subdivision 1 of this section. Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this part.

3. Tank tightness testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

4. Automatic tank gauging. Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

a. The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product;

b. The automatic tank gauging equipment must meet the inventory control (or other test of equivalent performance) requirements of subdivision 1 of this section; and

c. The test must be performed with the system operating in one of the following modes:

(1) In-tank static testing conducted at least once every 30 days; or

(2) Continuous in-tank leak detection operating on an uninterrupted basis or operating within a process that allows the system to gather incremental measurements to determine the leak status of the tank at least once every 30 days.

5. Vapor monitoring. Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:

a. The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

b. The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

c. The measurement of vapors by the monitoring device is not rendered inoperative by the groundwater, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days;

d. The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

e. The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

f. In the UST excavation zone, the site is assessed to ensure compliance with the requirements in subdivisions a through d of this subdivision 5 and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

g. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

6. Groundwater monitoring. Testing or monitoring for liquids on the groundwater must meet the following requirements:

a. The regulated substance stored is not readily miscible in water and has a specific gravity of less than one;

b. Groundwater is never more than 20 feet from the ground surface and the hydraulic conductivity of the soils between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);

c. The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low groundwater conditions;

d. Monitoring wells shall be sealed from the ground surface to the top of the filter pack;

e. Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

f. The continuous monitoring devices or manual methods used can detect the presence of at least 1/8 of an inch of free product on top of the groundwater in the monitoring wells;

g. Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in subdivisions a through e of this subdivision 6 and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

h. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

7. Interstitial monitoring. Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

a. For double-walled UST systems, the sampling or testing method can detect a leak through the inner wall in any portion of the tank that routinely contains product;

b. For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a leak between the UST system and the secondary barrier:

(1) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10^{-6} cm/sec for the regulated substance stored) to direct a leak to the monitoring point and permit its detection;

(2) The barrier is compatible with the regulated substance stored so that a leak from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

(3) For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

(4) The groundwater, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

(5) The site is assessed to ensure that the secondary barrier is always above the groundwater and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and

(6) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

c. For tanks with an internally fitted liner, an automated device can detect a leak between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

8. Statistical inventory reconciliation. Release detection methods based on the application of statistical principles to inventory data similar to those described in subdivision 1 of this section must meet the following requirements:

a. Report a quantitative result with a calculated leak rate;

b. Be capable of detecting a leak rate of 0.2 gallon per hour or a release of 150 gallons within 30 days; and

c. Use a threshold that does not exceed one-half the minimum detectible leak rate.

9. Other methods. Any other type of release detection method, or combination of methods, can be used if:

a. It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

b. The board may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subdivisions 3 through 8 of this section. In comparing methods, the board shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner

and operator must comply with any conditions imposed by the board on its use to ensure the protection of human health and the environment.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 4.4, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 503 October 16, 2017.

9VAC25-580-170. Methods of release detection for piping.

Owners and operators must obtain a permit and the required inspections in accordance with 9VAC25-580-50 or 9VAC25-580-60 for the installation of certain release detection equipment contained in subdivisions 1 through 3 of this section.

Each method of release detection for piping used to meet the requirements of 9VAC25-580-140 must be conducted in accordance with the following:

1. Automatic line leak detectors. Methods that alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect leaks of three gallons per hour at 10 pounds per square inch line pressure within one hour. An annual test of the operation of the leak detector must be conducted in accordance with subdivision A 3 c of 9VAC25-580-130.

2. Line tightness testing. A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

3. Applicable tank methods. Except as described in subdivision 1 of 9VAC25-580-140, any of the methods in subdivisions 5 through 9 of 9VAC25-580-160 may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 4.5, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-180. Release detection recordkeeping.

All UST system owners and operators must maintain records in accordance with 9VAC25-580-120 demonstrating compliance with all applicable requirements of this part. These records must include the following:

1. All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for five years from the date of installation or as long as the method of release detection is used, whichever is greater. Not later than January 1, 2021, records of site assessments required under subdivisions 5 f and 6 g of 9VAC25-580-160 must be maintained for as long as the methods are used. Records of site assessments developed after January 1, 2018, must be signed by a professional engineer or professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline acceptable to the board;

2. The results of any sampling, testing, or monitoring must be maintained for at least one year, or for another reasonable period of time determined by the board, except as follows:

a. The results of annual operation tests conducted in accordance with subdivision A 3 of 9VAC25-580-130 must be maintained for three years. At a minimum, the results must list each component tested, indicate whether each component tested meets criteria in subdivision A 3 of 9VAC25-580-130 or needs to have action taken, and describe any action taken to correct an issue;

b. The results of tank tightness testing conducted in accordance with subdivision 3 of 9VAC25-580-160 must be retained until the next test is conducted; and

c. The results of tank tightness testing, line tightness testing, and vapor monitoring using a tracer compound placed in the tank system conducted in accordance with 9VAC25-580-390 D must be retained until the next test is conducted; and

3. Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed or for such longer period as may be required by the board. Any

schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for five years from the date of installation.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 4.6, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 504 October 16, 2017.

Part V
Release Reporting, Investigation, and Confirmation

9VAC25-580-190. Reporting of suspected releases.

Owners and operators of UST systems must report to the board within 24 hours and follow the procedures in 9VAC25-580-210 for any of the following conditions:

1. The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).

2. Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, an unexplained presence of water in the tank, or liquid in the interstitial space of secondarily contained systems), unless:

a. The system equipment or component is found not to be releasing regulated substances to the environment;

b. Any defective system equipment or component is immediately repaired or replaced; and

c. For secondarily contained systems, except as provided for in subdivision 7 b (4) of 9VAC25-580-160, any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed.

3. Monitoring results, including investigation of an alarm, from a release detection method required under 9VAC25-580-140 and 9VAC25-580-150 that indicate a release may have occurred unless:

a. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result;

b. The leak is contained in the secondary containment and:

(1) Except as provided for in subdivision 7 b (4) of 9VAC25-580-160, any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed; and

(2) Any defective system equipment or component is immediately repaired or replaced;

c. In the case of inventory control, described in subdivision 1 of 9VAC25-580-160, a second month of data or in the case of manual tank gauging, a second week or month as prescribed in the chart under subdivision 2 d of 9VAC25-580-160 does not confirm the initial result or the investigation determines no release has occurred; or

d. The alarm was investigated and determined to be a nonrelease event (for example, from a power surge or caused by filling the tank during release detection testing).

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 5.1, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-200. Investigation due to off-site impacts.

When required by the board, owners and operators of UST systems must follow the procedures in 9VAC25-580-210 to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and state waters) that has been observed by the board or brought to its attention by another party.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 5.2, eff. October 25, 1989.

9VAC25-580-210. Release investigation and confirmation steps.

Unless corrective action is initiated in accordance with Part VI (9VAC25-580-230 et seq.) of this chapter, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under 9VAC25-580-190 within seven days, or another reasonable time period specified by the board upon written request made and approved within seven days after reporting of the suspected release.

The following steps are required for release investigation and confirmation:

1. System test. Owners and operators must conduct tests (according to the requirements for tightness testing in subdivision 3 of 9VAC25-580-160 and subdivision 2 of 9VAC25-580-170) or, as appropriate, secondary containment testing described in subdivision 4 of 9VAC25-580-110.

a. The test must determine whether:

(1) A leak exists in that portion of the tank that routinely contains product or in the attached delivery piping; or

(2) A breach of either wall of the secondary containment has occurred.

b. If the system test confirms a leak into the interstice or a release, owners and operators must repair, replace, upgrade, or close the UST system. In addition, owners and operators must begin corrective action in accordance with Part VI of this chapter if the test results for the system, tank, or delivery piping indicate that a release exists.

c. Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a release exists and if environmental contamination is not the basis for suspecting a release.

d. Owners and operators must conduct a site check as described in subdivision 2 of this section if the test results for the system, tank, and delivery piping do not indicate that a release exists but environmental contamination is the basis for suspecting a release.

2. Site check. Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of groundwater, and other factors appropriate for identifying the presence and source of the release. Samples shall be tested according to established EPA analytical methods or methods approved by the board.

a. If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators must begin corrective action in accordance with Part VI of this chapter.

b. If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation is not required.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 5.3, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 504 October 16, 2017.

9VAC25-580-220. Reporting and cleanup of spills and overfills.

A. Owners and operators of UST systems must contain and immediately clean up a spill or overfill and report to the board within 24 hours and begin corrective action in accordance with Part VI of this chapter in the following cases:

1. Spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or that causes a sheen on nearby surface water; and

2. Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR Part 302).

B. Owners and operators of UST systems must contain and immediately clean up a spill or overfill of petroleum that is less than 25 gallons and a spill or overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours owners and operators must immediately notify the board.

NOTE: Pursuant to 40 CFR §§ 302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under §§ 102 and 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC §§ 9602 and 9603) and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 5.4, eff. October 25, 1989.

Part VI
Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances

9VAC25-580-230. General.

Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this part except for USTs excluded under subsection B of 9VAC25-580-20 and UST systems subject to RCRA Subtitle C corrective action requirements under § 3004(u) of the Resource Conservation and Recovery Act, as amended.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 6.1, eff. October 25, 1989.

9VAC25-580-240. Initial response.

Upon confirmation of a release in accordance with 9VAC25-580-210 or after a release from the UST system is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release:

1. Report the release to the board (e.g., by telephone or electronic mail);

2. Take immediate action to prevent any further release of the regulated substance into the environment; and

3. Identify and mitigate fire, explosion, and vapor hazards.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 6.2, eff. October 25, 1989.

9VAC25-580-250. Initial abatement measures and site check.

A. Unless directed to do otherwise by the board, owners and operators must perform the following abatement measures:

1. Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment;

2. Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of the released substance into surrounding soils and groundwater;

3. Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);

4. Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator must comply with applicable state and local requirements;

5. Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by subdivision 2 of 9VAC25-580-210 or the closure site assessment of subsection A of 9VAC25-580-330. In selecting sample types, sample locations, and measurement methods, the owner and operator must consider the nature of the stored substance, the type of backfill, depth to groundwater and other factors as appropriate for identifying the presence and source of the release. Samples shall be tested according to established EPA analytical methods or methods approved the board; and

6. Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with 9VAC25-580-270.

B. Within 20 days after release confirmation, or within another reasonable period of time determined by the board upon written request made and approved within 20 days after release confirmation, owners and operators must submit a report to the board summarizing the initial abatement steps taken under subsection A of this section and any resulting information or data.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 6.3, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-260. Site characterization.

A. Owners and operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in 9VAC25-580-230 and 9VAC25-580-240. This information must include, but is not necessarily limited to, the following:

1. Data on the material released and the estimated quantity of release;

2. Data from available sources or site investigations concerning the following:

a. Site assessment to include: data on the physical/chemical properties of the contaminant; nature and quantity and extent of the release; evidence that free product is found to need recovery; geologic/hydrologic site characterization; current and projected land/water uses; water quality; subsurface soil conditions; evidence that contaminated soils are in contact with the groundwater; locations of subsurface conduits (e.g., sewers, utility lines, etc.); and climatological conditions. Samples collected for this site characterization shall be tested according to established EPA analytical methods or methods approved by the board;

b. Risk (exposure) assessment to include: evidence that wells of the area have been affected; use and approximate locations of wells potentially affected by the release; identification of potential and impacted receptors; migration routes; surrounding populations; potential for additional environmental damage;

c. Remediation assessment to include: potential for remediation and applicability of different remediation technologies to the site.

3. Results of the site check required under subdivision A 5 of 9VAC25-580-250; and

4. Results of the free product investigations required under subdivision A 6 of 9VAC25-580-250, to be used by owners and operators to determine whether free product must be recovered under 9VAC25-580-270.

B. Within 45 days of release confirmation or another reasonable period of time determined by the board upon written request made and approved within 45 days after release confirmation, owners and operators must submit the information collected in compliance with subsection A of this section to the board in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the board.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 6.4, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-270. Free product removal.

At sites where investigations under subdivision A 6 of 9VAC25-580-250 indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the board while continuing, as necessary, any actions initiated under 9VAC25-580-240 through 9VAC25-580-260, or preparing for actions required under 9VAC25-580-280. In meeting the requirements of this section, owners and operators must:

1. Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery by-products in compliance with applicable local, state and federal regulations;

2. Use abatement of free product migration as a minimum objective for the design of the free product removal system;

3. Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

4. Unless directed to do otherwise by the board, prepare and submit to the board, within 45 days after confirming a release, a free product removal report that provides at least the following information:

a. The name of the persons responsible for implementing the free product removal measures;

b. The estimated quantity, type, and thickness of free product observed or measured in wells, bore holes, and excavations;

c. The type of free product recovery system used;

d. Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

e. The type of treatment applied to, and the effluent quality expected from, any discharge;

f. The steps that have been or are being taken to obtain necessary permits for any discharge; and

g. The disposition of the recovered free product.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia, and 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 6.5, eff. October 25, 1989; amended, Virginia Register Volume 20, Issue 12, eff. March 24, 2004.

9VAC25-580-280. Corrective action plan.

A. At any point after reviewing the information submitted in compliance with 9VAC25-580-240, 9VAC25-580-250, and 9VAC25-580-260, the board may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and groundwater. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the board. Alternatively, owners and operators may, after fulfilling the requirements of 9VAC25-580-240, 9VAC25-580-250, and 9VAC25-580-260, choose to submit a corrective action plan for responding to contaminated soil and groundwater. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the board, and must modify their plan as necessary to meet this standard.

B. In conjunction with the information provided under subdivision A 2 of 9VAC25-580-260 (site assessment, risk (exposure) assessment, and remediation assessment), the corrective action plan must include the following information:

1. Detailed conceptual design including narrative description of technologies and how they will be applied at the site;

2. Projected remediation end points/degree of remediation;

3. Schedule of project implementation;

4. Schedule to achieve projected end points;

5. Operational and post-operational monitoring schedules (to include data submittals);

6. Proposed disposition of any wastes and discharges (if applicable);

7. Actions taken to obtain any necessary federal, state and local permits to implement the plan; and

8. Proposed actions to notify persons directly affected by the release or the planned corrective action.

C. The board will approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health, safety, and the environment. In making this determination, the board will consider the following factors as appropriate:

1. The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;

2. The hydrogeologic characteristics of the facility and the surrounding area;

3. The proximity, quality, and current and future uses of nearby surface water and groundwater;

4. The potential effects of residual contamination on nearby surface water and groundwater;

5. The site, risk (exposure), and remediation assessments as required by subdivision A 2 of 9VAC25-580-260; and

6. Any information assembled in compliance with this part.

D. Upon approval of the corrective action plan or as directed by the board, owners and operators must implement the plan, including modifications to the plan made by the board. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the board.

E. Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and groundwater before the corrective action plan is approved provided that they:

1. Notify the board of their intention to begin cleanup and obtain written approval to proceed with an agreed upon activity;

2. Comply with any conditions imposed by the board, including halting cleanup or mitigating adverse consequences from cleanup activities; and

3. Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the board for approval.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 6.6, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-290. [Repealed]

Historical Notes

Derived from VR680-13-02 § 6.7, eff. October 25, 1989; repealed, Virginia Register Volume 20, Issue 12, eff. March 24, 2004.

9VAC25-580-300. Public participation.

A. For each confirmed release that requires a corrective action plan, the board will require the owner and operator to provide notice to the public by means designed to reach those members of the public directly affected by the release or the planned corrective action. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or personal contacts by field staff.

B. The board must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

C. Before approving a corrective action plan, the board may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.

D. The board will require the owner and operator to give public notice that complies with subsection A of this section if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the board.

E. These public participation requirements do not supersede any public participation requirements of other regulations.

F. In the event the owner and operator have failed to give the required notice to the public, the board will provide such notice to the extent required by applicable federal law.

G. In those cases where the board implements the corrective plan, the board will provide such notice to the extent required by applicable federal law.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 6.8, eff. October 25, 1989.

Part VII
Out-of-Service UST Systems and Closure

9VAC25-580-310. Temporary closure.

Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

A permit from the building official must be obtained prior to temporary tank closure. No UST system shall be temporarily closed unless and until the system is inspected in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

In the case of state-owned facilities the Department of General Services shall function as the building official in accordance with § 36-98.1 of the Code of Virginia.

In the case of federal facilities the building official must be contacted. Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

1. When an UST system is temporarily closed, owners and operators must continue operation and maintenance of corrosion protection in accordance with 9VAC25-580-90, and any release detection in accordance with Parts IV (9VAC25-580-130 et seq.) and X (9VAC25-580-380 et seq.) of this chapter. Parts V (9VAC25-580-190 et seq.) and VI (9VAC25-580-230 et seq.) of this chapter must be complied with if a release is suspected or confirmed. However, release detection and release detection operation and maintenance testing and inspections in Parts III (9VAC25-580-80 et seq.) and IV of this chapter are not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3% by weight of the total capacity of the UST system, remain in the system. In addition, spill and overfill operation and maintenance testing and inspections in Part III of this chapter are not required.

2. When an UST system is temporarily closed for three months or more, owners and operators must also comply with the following requirements:

a. Leave vent lines open and functioning; and

b. Cap and secure all other lines, pumps, manways, and ancillary equipment.

3. When an UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in 9VAC25-580-50 for new UST systems or the upgrading requirements in 9VAC25-580-60, except that the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems at the end of this 12-month period in accordance with 9VAC25-580-320 through 9VAC25-580-350, unless the building official provides an extension of the 12-month temporary closure period. Owners and operators must complete a site assessment in accordance with 9VAC25-580-330 before such an extension can be applied for.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 7.1, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-320. Permanent closure and changes-in-service.

Owners and operators must obtain a permit and the required inspections in accordance with the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

A permit from the building official must be obtained prior to permanent tank closure or a change-in-service. No UST system shall be permanently closed or changed-in-service unless and until the system is inspected in accordance with the provisions of the Virginia Uniform Statewide Building Code (§ 36-97 et seq. of the Code of Virginia).

If such closure is in response to immediate corrective actions that necessitate timely tank removal, then the building official must be notified and the official's directions followed until a permit is issued.

In the case of state-owned facilities the Department of General Services shall function as the building official in accordance with § 36-98.1 of the Code of Virginia.

In the case of federal facilities the building official must be contacted. Owners and operators must obtain a permit and the required inspections in accordance with the provisions of the Virginia Uniform Statewide Building Code.

1. Owners and operators must within 30 days after either permanent closure or a change-in-service submit an amended UST notification form to the board.

2. The required assessment of the excavation zone under 9VAC25-580-330 must be performed after notifying the building official but before completion of the permanent closure or a change-in-service.

3. To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges. When the owner or operator suspects that the residual sludges are hazardous in nature the Department of Environmental Quality regulations shall be followed to facilitate the proper treatment, storage, manifesting, transport, and disposal. All tanks taken out of service permanently must be removed from the ground, filled with an inert solid material, or closed in place in a manner approved by the board.

4. Continued use of an UST system to store a nonregulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with 9VAC25-580-330.

NOTE: The following cleaning and closure procedures may be used to comply with this section:

a. American Petroleum Institute Recommended Practice RP 1604, Closure of Underground Petroleum Storage Tanks;

b. American Petroleum Institute Standard 2015, Safe Entry and Cleaning of Petroleum Storage Tanks, Planning and Managing Tank Entry from Decommissioning through Recommissioning;

c. American Petroleum Institute Recommended Practice 2016, Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks;

d. American Petroleum Institute Recommended Practice RP 1631, Interior Lining and Periodic Inspection of Underground Storage Tanks, may be used as guidance for compliance with this section;

e. National Fire Protection Association Standard 326, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair; and

f. The National Institute for Occupational Safety and Health Publication 80-106, Criteria for a Recommended Standard *** Working in Confined Space may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 7.2, eff. October 25, 1989; amended, Virginia Register Volume 20, Issue 12, eff. March 24, 2004; Volume 34, Issue 1, eff. January 1, 2018.

9VAC25-580-330. Assessing the site at closure or change-in-service.

A. Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample type or types (soil or water) and sample location or locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to groundwater and other factors appropriate for identifying the presence of a release. Samples shall be tested according to established EPA analytical methods or methods approved by the board. Where the suspected release is a petroleum product, the samples shall be analyzed for total petroleum hydrocarbons (TPH). The requirements of this section are satisfied if one of the external release detection methods allowed in subdivisions 5 and 6 of 9VAC25-580-160 is operating in accordance with the requirements in 9VAC25-580-160 at the time of closure, and indicates no release has occurred.

B. In all cases where a sample or samples are analyzed, the owner and operator shall submit, along with the amended UST notification form as required in subdivision 1 of 9VAC25-580-320, a copy of the laboratory results (including a statement as to the test method used), a description of the area sampled, and a site map depicting tanks, piping, and sample location or locations.

C. If contaminated soils, contaminated groundwater or free product as a liquid or vapor is discovered under subsection A of this section, or by any other manner, owners and operators must begin corrective action in accordance with Part VI (9VAC25-580-230 et seq.) of this chapter.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from VR680-13-02 § 7.3, eff. October 25, 1989; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 504 October 16, 2017.

9VAC25-580-340. Applicability to previously closed UST systems.

When directed by the board, the owner and operator of an UST system permanently closed before December 22, 1988, must assess the excavation zone and close the UST system in accordance with this part if releases from the UST may, in the judgment of the board, pose a current or potential threat to human health and the environment.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 7.4, eff. October 25, 1989.

9VAC25-580-350. Closure records.

Owners and operators must maintain records in accordance with 9VAC25-580-120 that are capable of demonstrating compliance with closure requirements under this part. The results of the excavation zone assessment required in 9VAC25-580-330 must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

1. By the owners and operators who took the UST system out of service;

2. By the current owners and operators of the UST system site; or

3. By mailing these records to the board if they cannot be maintained at the closed facility.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 7.5, eff. October 25, 1989.

Part VIII
Delegation

9VAC25-580-360. Delegation of authority.

The Director of the Department of Environmental Quality, or in his absence a designee acting for him, may perform any act of the board provided under this chapter, except as limited by § 62.1-44.14 of the Code of Virginia.

Statutory Authority

§§ 62.1-44.15(10) and 62.1-44.34:9 of the Code of Virginia.

Historical Notes

Derived from VR680-13-02 § 8.1, eff. October 25, 1989.

Part IX
Delivery Prohibition

9VAC25-580-370. Requirements for delivery prohibition.

A. No person shall deliver to, deposit into, or accept a petroleum product or other regulated substance into an underground storage tank that has been identified under subdivision G 2 of this section by the board to be ineligible for such delivery, deposit, or acceptance. Unless authorized in writing by the board, no person shall alter, deface, remove, or attempt to remove a tag that prohibits delivery, deposit, or acceptance of a petroleum product or other regulated substance to an underground storage tank.

B. When an inspection or other information provides reason to believe one or more of the following violations exists, the board shall initiate a proceeding in accordance with subsection D of this section:

1. Spill prevention equipment is not installed on the UST system properly as required by 9VAC25-580-50 or 9VAC25-580-60 or is disabled;

2. Overfill protection equipment is not installed on the UST system properly as required by 9VAC25-580-50 or 9VAC25-580-60 or is disabled;

3. Release detection equipment is not installed on the UST system properly or is disabled or a release detection method is not being performed as required by 9VAC25-580-50 or 9VAC25-580-60;

4. Corrosion protection equipment is not installed on the UST system properly as required by 9VAC25-580-50 or 9VAC25-580-60 or is disabled;

5. Secondary containment is not installed on the UST system properly as required by 9VAC25-580-50, 9VAC25-580-60, or 9VAC25-580-150 or is disabled; or

6. The board has reason to believe that an UST system is leaking and the owner or operator has failed to initiate and complete the investigation and confirmation requirements of 9VAC25-580-190, 9VAC25-580-200, and 9VAC25-580-210.

C. For purposes of subsection B of this section, spill prevention, overfill prevention, corrosion protection, release detection, or secondary containment equipment that is not verifiable as installed is not installed.

D. The board shall provide written notice to the owner and operator pursuant to subdivision G 1 of this section that it will conduct an informal fact finding pursuant to § 2.2-4019 of the Code of Virginia to determine whether the underground storage tank shall be ineligible for delivery, deposit, or acceptance of a petroleum product or other regulated substance. The fact finding shall be scheduled as soon as practicable after the notice, and within 10 business days in any event. Upon a finding to impose delivery prohibition, the board shall affix a tag to the fill pipe of the underground storage tank prohibiting delivery, deposit, or acceptance of a petroleum product or other regulated substance.

E. When the board issues a notice of alleged violation based on an inspection or other information that provides reason to believe a UST system is not in compliance with the requirements of Part II (9VAC25-580-50 et seq.), III (9VAC25-580-80 et seq.), IV (9VAC25-580-130 et seq.), or X (9VAC25-580-380 et seq.) of this chapter not listed in subsection B of this section, the requirements of 9VAC25-580-240 through 9VAC25-580-280, or the requirements of 9VAC25-590 (Petroleum Underground Storage Tank Financial Responsibility Requirements), and the owner or operator fails to comply with the notice of alleged violation within the time prescribed by the board, the board may proceed in accordance with subsection D of this section.

F. The board may classify all underground storage tanks containing petroleum or any other regulated substance at a facility as ineligible for delivery, deposit, or acceptance of a petroleum product or other regulated substance if one or more underground storage tanks at the facility has been classified as ineligible for more than 90 days and the ineligible underground storage tank has neither been closed in accordance with 9VAC25-580-310 or 9VAC25-580-320 nor returned to compliance. The board shall provide written notice to the owner and operator pursuant to subdivision G 1 of this section that it will conduct an informal fact finding pursuant to § 2.2-4019 of the Code of Virginia to determine whether all the underground storage tanks shall be ineligible for delivery, deposit, or acceptance of a petroleum product or other regulated substance. The fact finding shall be scheduled as soon as practicable after the notice, and within 10 business days in any event.

G. Notice.

1. The board shall provide written notice of an informal fact finding to consider delivery prohibition to the owner and operator. The notice shall meet the requirements of § 2.2-4019 of the Code of Virginia. The notice shall further advise the owner and operator of the possibility of a special order pursuant to subsection I of this section.

2. The presence of the delivery prohibition tag on the fill pipe of an ineligible underground storage tank shall be sufficient notice to any person, including the owner, the operator, and product deliverers, that the underground storage tank is ineligible for delivery or deposit. The board may use other methods in addition to the delivery prohibition tag to provide notice to product deliverers.

H. An owner or operator shall notify the board in writing once an ineligible underground storage tank has been returned to compliance and provide a written report detailing all actions that have been taken to return the UST system to compliance, as well as supporting evidence such as test reports, invoices, receipts, inventory records, etc. As soon as practicable after confirming that the underground storage tank is in compliance with the requirements of this chapter or 9VAC25-590, or both, but in no event later than two business days, the board shall remove or authorize the owner or operator, in writing, to remove the delivery prohibition tag.

I. If the board determines that a violation exists that warrants the imposition of delivery prohibition, the board may further consider whether the threat posed by the violation is outweighed by the need for fuel from the underground storage tank in question to meet an emergency situation or the need for availability of or access to motor fuel in any rural and remote area. If the board finds that such a condition outweighs the immediate risk of the violation, the board may defer imposition of delivery prohibition for up to 180 days. In every such case the director shall consider (i) issuing a special order under the authority of subdivision 9 of § 10.1-1186 of the Code of Virginia prescribing a prompt schedule for abating the violation and (ii) imposing a civil penalty.

J. The board may temporarily authorize an owner or operator to accept delivery into an ineligible underground storage tank if such activity is necessary to test or calibrate the underground storage tank or dispenser system.

K. Nothing in this section shall prevent the board or the director from exercising any other enforcement authority including, without limitation, their authority to issue emergency orders and their authority to seek injunctive relief.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from Virginia Register Volume 26, Issue 25, eff. September 15, 2010; amended, Virginia Register Volume 34, Issue 1, eff. January 1, 2018.

APPENDIX I. (Repealed.)

APPENDIX II. (Repealed.)

Part X
UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems

9VAC25-580-380. General requirements.

A. Implementation of requirements. Owners and operators must comply with the requirements of this part for UST systems with field-constructed tanks and airport hydrant systems as follows:

1. For UST systems installed before January 1, 2018, the requirements are effective according to the following schedule:

Requirement	Effective Date
Upgrading UST systems; general operating requirements; and operator training	January 1, 2021
Release detection	January 1, 2021
Release reporting, response, and investigation; closure; financial responsibility and notification (except as provided in subsection B of this section)	January 1, 2018

2. For UST systems installed on or after January 1, 2018, the requirements apply at installation.

B. Not later than January 1, 2021, all owners of previously deferred UST systems must submit a one-time notice of tank system existence to the board, using the UST Notification Form. Owners and operators of UST systems in use as of January 1, 2018, must demonstrate financial responsibility at the time of submission of the notification form.

C. Except as provided in 9VAC25-580-390, owners and operators must comply with the requirements of Parts I (9VAC25-580-10 et seq.) through VII (9VAC25-580-310 et seq.) and IX (9VAC25-580-370 et seq.) of this chapter and 9VAC25-590.

D. In addition to the codes of practice listed in 9VAC25-580-50, owners and operators may use military construction criteria, such as Unified Facilities Criteria (UFC) 3-460-01, Petroleum Fuel Facilities, when designing, constructing, and installing airport hydrant systems and UST systems with field-constructed tanks.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 504 October 16, 2017.

9VAC25-580-390. Additions, exceptions, and alternatives for UST systems with field-constructed tanks and airport hydrant systems.

A. Exception to piping secondary containment requirements. Owners and operators may use single walled piping when installing or replacing piping associated with UST systems with field-constructed tanks greater than 50,000 gallons and piping associated with airport hydrant systems. Piping associated with UST systems with field-constructed tanks less than or equal to 50,000 gallons not part of an airport hydrant system must meet the secondary containment requirement when installed or replaced.

B. Upgrade requirements. Not later than January 1, 2021, airport hydrant systems and UST systems with field-constructed tanks where installation commenced before January 1, 2018, must meet the following requirements or be permanently closed pursuant to Part VII (9VAC25-580-310 et seq.) of this chapter.

1. Corrosion protection. UST system components in contact with the ground that routinely contain regulated substances must meet one of the following:

a. Except as provided in subsection A of this section, the new UST system performance standards for tanks at subdivision 1 of 9VAC25-580-50 and for piping at subdivision 2 at 9VAC25-580-50; or

b. Be constructed of metal and cathodically protected according to a code of practice developed by a nationally recognized association or independent testing laboratory and meets the following:

(1) Cathodic protection must meet the requirements of subdivisions 1 b (2), (3), and (4) of 9VAC25-580-50 for tanks and subdivisions 2 b (2), (3), and (4) of 9VAC25-580-50 for piping.

(2) Tanks older than 10 years without cathodic protection must be assessed to ensure the tank is structurally sound and free of corrosion holes prior to adding cathodic protection. The assessment must be by internal inspection or another method determined by the board to adequately assess the tank for structural soundness and corrosion holes.

Note: The following codes of practice may be used to comply with subsection B of this section:

(a) NACE International Standard Practice SP0285, External Control of Underground Storage Tank Systems by Cathodic Protection;

(b) NACE International Standard Practice SP0169, Control of External Corrosion on Underground or Submerged Metallic Piping Systems;

(c) National Leak Prevention Association Standard 631, Chapter C, Internal Inspection of Steel Tanks for Retrofit of Cathodic Protection; or

(d) American Society for Testing and Materials Standard G158, Standard Guide for Three Methods of Assessing Buried Steel Tanks.

2. Spill and overfill prevention equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all UST systems with field-constructed tanks and airport hydrant systems must comply with new UST system spill and overfill prevention equipment requirements specified in subdivision 3 of 9VAC25-580-50.

C. Walkthrough inspections. In addition to the walkthrough inspection requirements in 9VCA25-580-85, owners and operators must inspect the following additional areas for airport hydrant systems at least once every 30 days if confined space entry according to the Occupational Safety and Health Administration (see 29 CFR Part 1910) is not required or at least annually if confined space entry is required and keep documentation of the inspection according to 9VAC25-580-85 B.

1. Hydrant pits – visually check for any damage, remove any liquid or debris, and check for any leaks; and

2. Hydrant piping vaults – check for any hydrant piping leaks.

D. Release detection. Owners and operators of UST systems with field-constructed tanks and airport hydrant systems must begin meeting the release detection requirements described in this part not later than January 1, 2021.

1. Methods of release detection for field-constructed tanks and airport hydrant systems. Owners and operators of shop fabricated USTs that are part of airport hydrant systems and field-constructed tanks with a capacity less than or equal to 50,000 gallons must meet the release detection requirements in Part IV (9VAC25-580-130 et seq.) of this chapter. Owners and operators of field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in Part IV of this chapter (except subdivisions 5 and 6 of 9VAC25-580-160 must be combined with inventory control as stated in this subdivision) or use one or a combination of the following alternative methods of release detection:

a. Conduct an annual tank tightness test that can detect a 0.5 gallon per hour leak rate;

b. Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to one gallon per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every three years;

c. Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to two gallons per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every two years;

d. Perform vapor monitoring (conducted in accordance with subdivision 5 of 9VAC25-580-160 for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;

e. Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25, ATA Airport Fuel Facility Operations and Maintenance Guidance Manual, or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5% of flow-through; and

(1) Perform a tank tightness test that can detect a 0.5 gallon per hour leak rate at least every two years; or

(2) Perform vapor monitoring or groundwater monitoring (conducted in accordance with subdivision 5 or 6 of 9VAC25-580-160, respectively, for the stored regulated substance) at least every 30 days; or

f. Another method approved by the board if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subdivisions D 1 a through D 1 e of this section. In comparing methods, the board shall consider the size of release that the method can detect and the frequency and reliability of detection.

2. Methods of release detection for piping. Owners and operators of underground piping associated with field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in Part IV of this chapter. Owners and operators of underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons must follow either the requirements in Part IV (except subdivisions 5 and 6 of 9VAC25-580-160 must be combined with inventory control as stated in this subdivision) or use one or a combination of the following alternative methods of release detection:

a. (1) Perform a semiannual or annual line tightness test at or above the piping operating pressure in accordance with the following table:

Maximum Leak Detection Rate Per Test Section Volume		
Test Section Volume (Gallons)	Semiannual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)	Annual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)
< 50,000	1.0	0.5
≥ 50,000 to < 75,000	1.5	0.75
≥ 75,000 to < 100,000	2.0	1.0
≥ 100,000	3.0	1.5

(2) Piping segment volumes equal to or greater than 100,000 gallons not capable of meeting the maximum 3.0 gallons per hour leak rate for the semiannual test may be tested at a leak rate up to 6.0 gallons per hour according to the following schedule:

Phase in for Piping Segments ≥ 100,000 Gallons in Volume	
First test	Not later than January 1, 2021, (may use up to 6.0 gph leak rate)
Second test	Between January 1, 2021, and January 1, 2024, (may use up to 6.0 gph leak rate)
Third test	Between January 1, 2024, and January 1, 2025, (must use 3.0 gph for leak rate)
Subsequent tests	After January 1, 2025, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table above

b. Perform vapor monitoring (conducted in accordance with subdivision 5 of 9VAC25-580-160 for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;

c. Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25, ATA Airport Fuel Facility Operations and Maintenance Guidance Manual, or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5% of flow-through; and

(1) Perform a line tightness test (conducted in accordance with subdivision 2 a of this subsection using the leak rates for the semiannual test) at least every two years; or

(2) Perform vapor monitoring or groundwater monitoring (conducted in accordance with subdivision 5 or 6 of 9VAC25-580-160, respectively, for the stored regulated substance) at least every 30 days; or

d. Another method approved by the board if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subdivisions D 2 a, D 2 b, and D 2 c of this section. In comparing methods, the board shall consider the size of release that the method can detect and the frequency and reliability of detection.

3. Recordkeeping for release detection. Owners and operators must maintain release detection records according to the recordkeeping requirements in 9VAC25-580-180.

E. Applicability of closure requirements to previously closed UST systems. When directed by the board, the owner and operator of an UST system with field-constructed tanks or airport hydrant system permanently closed before January 1, 2018, must assess the excavation zone and close the UST system in accordance with Part VII of this chapter if releases from the UST may, in the judgment of the board, pose a current or potential threat to human health and the environment.

Statutory Authority

§§ 62.1-44.15 and 62.1-44.34:9 of the Code of Virginia; 42 USC § 6901 et seq.; 40 CFR Parts 280 and 281.

Historical Notes

Derived from Virginia Register Volume 34, Issue 1, eff. January 1, 2018; Errata, 34:4 VA.R. 504 October 16, 2017.

FORMS (9VAC25-580)

Notification for Underground Storage Tanks (USTs), Virginia DEQ Water Form 7530-3 (rev. 1/2018)

Notification for Underground Storage Tanks (USTs), Virginia DEQ Water Form 7530-3 instructions (rev. 1/2018)

Notification for Underground Storage Tanks Change of Ownership by Former Owner, Virginia DEQ Water Form 7530-3A (rev. 4/2016)

Notification for Underground Storage Tanks Change of Ownership by Former Owner, Virginia DEQ Water Form 7530-3A instructions (rev. 4/2016)

Notification for Underground Storage Tanks Multiple Facility Amendment by Currently Registered Owner, Virginia DEQ Water Form 7530-3B (rev. 4/2016)

Notification for Underground Storage Tanks Multiple Facility Amendment by Currently Registered Owner, Virginia DEQ Water Form 7530-3B instructions (rev. 4/2016)

Notification for Underground Storage Tanks (USTs) Change of Ownership for UST Facility, Virginia DEQ Water Form 7530-3C (rev. 1/2018)
